

# Audit - EU DK MAL Code

## AMERCOAT 240LT HAZE GRAY F/S 26270 RESIN

MAL Code	Product as is	Ready-for-use mixture
MAL Protection	<p data-bbox="315 284 353 308">3-5</p> <p data-bbox="315 325 1814 384"><b>According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:</b></p> <p data-bbox="315 421 1814 539"><b>General:</b> Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.</p> <p data-bbox="315 572 1778 632">In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/ apron/coveralls/protective clothing as appropriate or as instructed.</p> <p data-bbox="315 716 488 740">MAL-code: 3-5</p> <p data-bbox="315 746 1805 836"><b>Application:</b> When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns.</p> <ul data-bbox="315 869 719 893" style="list-style-type: none"><li>- Protective clothing must be worn.</li></ul> <p data-bbox="315 932 1814 1050">During downtimes, cleaning and repair of closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.</p> <ul data-bbox="315 1083 1216 1107" style="list-style-type: none"><li>- Air-supplied half mask, protective clothing and eye protection must be worn.</li></ul> <p data-bbox="315 1145 1146 1169">When spraying in new* booths if the operator is outside the spray zone.</p> <ul data-bbox="315 1208 987 1232" style="list-style-type: none"><li>- Air-supplied half mask and eye protection must be worn.</li></ul> <p data-bbox="315 1270 1774 1329">When spraying in existing* spray booths, if the operator is outside the spray zone. During non-atomizing spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone.</p> <ul data-bbox="315 1362 1025 1386" style="list-style-type: none"><li>- Air-supplied full mask and protective clothing must be worn.</li></ul> <p data-bbox="315 1425 1783 1484">During all spraying where atomization occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.</p> <ul data-bbox="315 1517 1099 1541" style="list-style-type: none"><li>- Air-supplied full mask, protective clothing and hood must be worn.</li></ul>	<p data-bbox="1888 284 2063 308"><input checked="" type="checkbox"/> Not applicable.</p> <p data-bbox="1888 325 2063 349"><input checked="" type="checkbox"/> Not applicable.</p> <p data-bbox="1888 716 2063 740"><input checked="" type="checkbox"/> Not applicable.</p>

Not applicable.

**Drying:** Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc. must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

**Polishing:** When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

**Caution** The regulations contain other stipulations in addition to the above.

\*See Regulations.

Not applicable.

Not applicable.

Low Boiling  
Liquid  
MAL Number  
Audit (Textual)

185.9

Not applicable.

5

Not applicable.

Figure-before-dash (from MAL Number) = 3  
800 < MAL Number [1185.9] ≤ 1600  
MAL Number = density \* Σ[Conc(i) \* MAL Factor(i)] = 1.649 \* 719.2 = 1185.9  
Density (from Density (g/m<sup>3</sup>) data entry) = 1.649  
Σ[Conc(i) \* MAL Factor(i)] = 719.2  
[1-BUTANOL] Conc \* MAL Factor = 4.256% \* 67 = 285.2  
MAL Factor entered against range: '0 to 100' = 67  
[4-METHYLPENTAN-2-ONE / METHYL ISOBUTYL KETONE] Conc \* MAL Factor = 3.783% \* 48 = 181.6  
MAL Factor entered against range: '0 to 100' = 48  
[cyclohexanone] Conc \* MAL Factor = 1.488% \* 70 = 104.2  
MAL Factor entered against range: '0 to 100' = 70  
[N-BUTYL ACETATE] Conc \* MAL Factor = 1.467% \* 14 = 20.54  
MAL Factor entered against range: '0 to 100' = 14  
[Hydrocarbons, C9, aromatics ] Conc \* MAL Factor = 1.442% \* 58 = 83.64  
MAL Factor entered against range: '0 to 100' = 58  
[triethoxyoctylsilane] Conc \* MAL Factor = 0.4456% \* 49 = 21.83  
MAL Factor entered against range: '0 to 100' = 49  
[DISTILLATES (PETROLEUM), HYDROTREATED LIGHT] Conc \* MAL Factor = 0.3306% \* 14 = 4.628  
MAL Factor entered against range: '0 to 100' = 14  
[XYLENES] Conc \* MAL Factor = 0.1209% \* 46 = 5.559  
MAL Factor entered against range: '0 to 100' = 46  
[ETHYLBENZENE] Conc \* MAL Factor = 0.04922% \* 46 = 2.264  
MAL Factor entered against range: '0 to 100' = 46  
[ISOBUTYL ALCOHOL] Conc \* MAL Factor = 0.02723% \* 67 = 1.824  
MAL Factor entered against range: '0 to 100' = 67  
[ETHYL ALCOHOL] Conc \* MAL Factor = 0.01938% \* 7 = 0.1357  
MAL Factor entered against range: '0 to 100' = 7  
[METHYL AMYL ALCOHOL] Conc \* MAL Factor = 0.01527% \* 100 = 1.527  
MAL Factor entered against range: '0 to 100' = 100  
[CUMENE] Conc \* MAL Factor = 0.002097% \* 1000 = 2.097  
MAL Factor entered against range: '0 to 100' = 1000  
[BENZENE] Conc \* MAL Factor = 0.001657% \* 880 = 1.458  
MAL Factor entered against range: '0 to 100' = 880  
[CYCLOHEXANOL] Conc \* MAL Factor = 0.001492% \* 15 = 0.02238  
MAL Factor entered against range: '0 to 100' = 15  
[DI-N-BUTYL ETHER / DIBUTYL ETHER] Conc \* MAL Factor = 0.001114% \* 1000 = 1.114  
Found via vapor pressure and EU CLP classification = 1000  
Vapor Pressure ≥ 0.1 mm Hg  
Vapor Pressure (mm Hg) from entered value = 3.45029  
GHS Status - EU  
TO - SingleExposure - Respiratory Tract irritation - Category 3 - From 'Entered data'  
Entered data - [EU] [11] [Datalink]  
Serious eye damage / eye irritation - Category 2 - From 'Entered data'

Entered data - [EU] [11] [Datalink]  
Skin corrosion/irritation - Category 2 - From 'Entered data'  
Entered data - [EU] [11] [Datalink]  
[1-PENTANOL] Conc \* MAL Factor = 0.0008912% \* 28 = 0.02495  
MAL Factor entered against range: '0 to 100' = 28  
[FORMIC ACID] Conc \* MAL Factor = 0.000746% \* 1600 = 1.194  
MAL Factor entered against range: '0 to 100' = 1600  
[ACETIC ACID] Conc \* MAL Factor = 0.0007033% \* 400 = 0.2813  
MAL Factor entered against range: '0 to 100' = 400  
[TOLUENE] Conc \* MAL Factor = 0.0006780% \* 74 = 0.05017  
MAL Factor entered against range: '0 to 100' = 74  
[PROPYL ALCOHOL] Conc \* MAL Factor = 0.0000557% \* 20 = 0.001114  
MAL Factor entered against range: '0 to 100' = 20  
[EPICHLOROHYDRIN] Conc \* MAL Factor = 0.000008681% \* 5300 = 0.04601  
MAL Factor entered against range: '0 to 100' = 5300  
Ingredients with MAL factor of 0 [did not contribute] {Denmark MAL Code}  
Talc, non-asbestos form (47.30%)  
MAL Factor entered against range: '0 to 100' = 0  
EPOXY RESIN (AVERAGE MOLECULAR WEIGHT > 1100) (18.36%)  
MAL Factor entered against range: '0 to 100' = 0  
Bisphenol A diglycidyl ether (8.681%)  
MAL Factor entered against range: '0 to 100' = 0  
TITANIUM DIOXIDE (6.772%)  
MAL Factor entered against range: '0 to 100' = 0  
MICA (1.713%)  
MAL Factor entered against range: '0 to 100' = 0  
AMIDE MIXTURE (0.549%)  
MAL Factor entered against range: '0 to 100' = 0  
CHLORITE-GROUP MINERALS (0.4927%)  
MAL Factor entered against range: '0 to 100' = 0  
DOLomite (0.4927%)  
MAL Factor entered against range: '0 to 100' = 0  
MAGNESIUM CARBONATE (0.4927%)  
MAL Factor entered against range: '0 to 100' = 0  
QUARTZ (<10 microns) (0.4894%)  
MAL Factor entered against range: '0 to 100' = 0  
PROPRIETARY RESIN (0.3679%)  
Default assumption [non-volatile] = 0  
ALUMINUM HYDROXIDE (0.2507%)  
MAL Factor entered against range: '0 to 100' = 0  
POLYAMINE AMIDE SALT (0.214%)  
MAL Factor entered against range: '0 to 100' = 0  
CARBON BLACK (0.12%)  
MAL Factor entered against range: '0 to 100' = 0  
SILICA (0.07162%)  
MAL Factor entered against range: '0 to 100' = 0  
IRON HYDROXIDE OXIDE (0.04897%)  
MAL Factor entered against range: '0 to 100' = 0  
ZIRCONIUM OXIDE (0.03581%)  
MAL Factor entered against range: '0 to 100' = 0  
TRIMETHYLOLPROPANE (0.03223%)  
MAL Factor entered against range: '0 to 100' = 0  
PROPYLENE GLYCOL (0.02054%)  
MAL Factor entered against range: '0 to 100' = 0  
PROPRIETARY EMULSION (0.01569%)  
Default assumption [non-volatile] = 0  
WATER (0.01035%)  
MAL Factor entered against range: '0 to 100' = 0  
branched n-octyltriethoxysilane (0.007312%)  
Default assumption [non-volatile] = 0  
MANGANESE (0.003449%)  
MAL Factor entered against range: '0 to 100' = 0  
BUTYLATED HYDROXYTOLUENE (0.001705%)  
MAL Factor entered against range: '0 to 100' = 0  
NICKEL (0.001183%)  
MAL Factor entered against range: '0 to 100' = 0  
BUTYRALDEHYDE (0.001114%)  
MAL Factor entered against range: '0 to 100' = 0

CHROMIUM (0.0009362%)

MAL Factor entered against range: '0 to 100' = 0

VANADIUM (0.0003942%)

Default assumption [non-volatile] = 0

COPPER (0.0002464%)

MAL Factor entered against range: '0 to 100' = 0

BARIUM (0.00009855%)

From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0

Available value in mg/m<sup>3</sup> = 0.5

4,4-ISOPROPYLIDENEDIPHENOL (0.00004254%)

MAL Factor entered against range: '0 to 100' = 0

2-BROMO-2-NITRO-1,3-PROPANEDIOL (0.00003852%)

MAL Factor entered against range: '0 to 100' = 0

TIN (0.0000343%)

From US (ACGIH) OELs: Product is assumed to be non-volatile, due to an OEL in mg/m<sup>3</sup> being available, and no ppm OEL being available] = 0

Available value in mg/m<sup>3</sup> = 2

Figure-after-dash (Ingredient(s) above the cut-off on their own) = 5

Ingredients above the Figure-after-dash 5 concentration limit on their own {Denmark MAL Code}

EPOXY RESIN (AVERAGE MOLECULAR WEIGHT > 1100) (18.36%)

Ingredient concentration is above the limit [10%]

Bisphenol A diglycidyl ether (8.681%)

Ingredient concentration is above the limit [1%]

Stricter figure-after-dash numbers that are not available because  $\Sigma$  [ing conc / ing limit] < 1

Figure-after-dash 6 calculated ratio:  $\Sigma$  [ing conc / ing limit] = 0.0706298552

QUARTZ (<10 microns): Ing conc / Ing limit = 0.4894 / 10 = 0.04894

Minimum value of concentration limit associated with figure-after-dash 6 = 10

CARBON BLACK: Ing conc / Ing limit = 0.12 / 25 = 0.0048

Minimum value of concentration limit associated with figure-after-dash 6 = 25

BENZENE: Ing conc / Ing limit = 0.001657 / 0.1 = 0.01657

Minimum value of concentration limit associated with figure-after-dash 6 = 0.1

NICKEL: Ing conc / Ing limit = 0.001183 / 5 = 0.0002365

Minimum value of concentration limit associated with figure-after-dash 6 = 5

EPICHLOROHYDRIN: Ing conc / Ing limit = 0.00008681 / 0.1 = 0.00008681

Minimum value of concentration limit associated with figure-after-dash 6 = 0.1